

Appl. No. 10/710,935
Amdt. dated July 28, 2006
Reply to Office action of June 28, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

- 5 Claim 1 (original) A non-volatile memory cell, comprising:
a substrate, the substrate comprising a first region and a second region;
a plurality of isolation structures positioned on the substrate, the isolation structures comprising a first isolation structure positioned in the first region and a second isolation structure surrounding the second region;
10 a control gate positioned on the first isolation structure in the first region;
a first insulating layer positioned on the control gate;
a second insulating layer positioned on the portion of the substrate in the second region; and
a floating gate positioned on the first insulating layer and the second insulating layer.
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- Claim 2 (original) The non-volatile memory cell of claim 1, wherein the portion of the floating gate positioned in the first region is stacked above the control gate.
- Claim 3 (original) The non-volatile memory cell of claim 1, wherein the floating gate
20 comprises an opening positioned above the first insulating layer, and the opening is used to form a wire therein to connect to the control gate.
- Claim 4 (original) The non-volatile memory cell of claim 1, wherein the substrate
25 comprises a well of a first conductivity type positioned in the first region and the second region.
- Claim 5 (original) The non-volatile memory cell of claim 1, wherein the substrate

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comprises at least a doping region of a second conductivity type positioned beneath the second insulating layer.

5 Claim 6 (original) The non-volatile memory cell of claim 1, wherein the isolation structures comprise field oxide layers or shallow trench isolation structures.

10 Claim 7 (original) The non-volatile memory cell of claim 1, wherein the first insulating layer comprises a composite layer composed of an oxide layer, a silicon nitride layer, and a silicon oxide layer.

Claim 8 (original) The non-volatile memory cell of claim 1, wherein the second insulating layer comprises a tunneling oxide layer.

15 Claims 9-20 (cancelled)